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# 67  
Pro And  
M. Brunson  
11/15/01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Vahala et al  
Filed: 02/16/2001  
App. No.: 09/788,300  
For: Resonant optical filters

PRELIMINARY AMENDMENT UNDER 37 CFR §1.115

Assistant Commissioner for Patents  
Washington, DC 20231

07/30/2001

Sir:

Please amend the above named application as set forth below.

AMENDMENT

Please insert the following new claims.

15. A resonant optical filter, comprising:
- a first transmission optical waveguide adapted for transmitting therethrough a plurality of optical signals, the first transmission optical waveguide having an evanescent optical coupling segment;
  - a second transmission optical waveguide adapted for transmitting therethrough a plurality of optical signals, the second transmission optical waveguide having an evanescent optical coupling segment; and
  - a plurality of optical resonators forming a coupled-optical-resonator system and including at least one fiber-ring optical resonator, the coupled-optical-resonator system being evanescently optically coupled to each of the first transmission optical waveguide and the second transmission optical waveguide at the respective evanescent optical coupling segment thereof for transferring a resonant optical signal between the first transmission optical waveguide and the second transmission optical waveguide, each fiber-ring optical resonator including a transverse resonator segment integral with a resonator optical fiber between first and second segments of the resonator optical fiber and having a circumferential optical path length sufficiently different from a circumferential optical path length of an immediately adjacent portion of at least one of the first and second segments of the resonator optical fiber so as to enable the resonator segment to support at least one resonant optical mode near an outer circumferential surface of the fiber-ring